

#3737 Store at -20°C

SUZ12 (D39F6) XP[®] Rabbit mAb



✓ 100 µl
(10 western blots)

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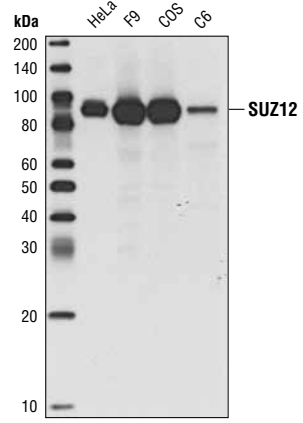
rev. 12/30/11

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #23512
Swiss-Prot Acc. #Q15022

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, ChIP Endogenous	H, M, R, Mk	83 kDa	Rabbit IgG**

Background: The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell cycle regulation and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, EED-EZH2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. Methylation of Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinylates histone H2A on Lys119 (5). Suppressor of Zeste 12 (SUZ12) is a component of the PRC2 complex, which together with Ezh2 and Eed is absolutely required for histone methyl-transferase activity (6). SUZ12 contains a C2H2 zinc finger domain similar to the zinc finger domains found in sequence-specific DNA binding proteins and may mediate the interaction between EZH2 and nucleosomes (6). SUZ12 is overexpressed in several human tumors, including tumors of the colon, breast and liver (7,8).



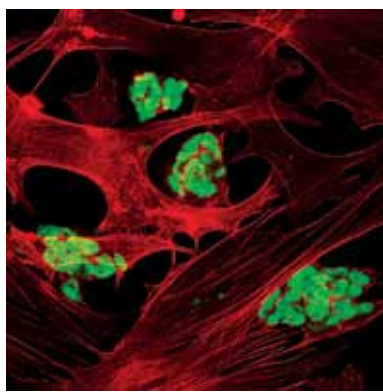
Western blot analysis of extracts from various cell lines using SUZ12 (D39F6) XP[®] Rabbit mAb.

Specificity/Sensitivity: SUZ12 (D39F6) XP[®] Rabbit mAb detects endogenous levels of SUZ12 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of the human SUZ12 protein.

Background References:

- (1) Boyer, L.A. et al. (2006) *Nature* 441, 349-53.
- (2) Lee, T.I. et al. (2006) *Cell* 125, 301-13.
- (3) Cao, R. et al. (2002) *Science* 298, 1039-43.
- (4) Müller, J. et al. (2002) *Cell* 111, 197-208.
- (5) Wang, H. et al. (2004) *Nature* 431, 873-8.
- (6) Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57-67.
- (7) Kirmizis, A. et al. (2003) *Mol Cancer Ther* 2, 113-21.
- (8) Kirmizis, A. et al. (2004) *Genes Dev* 18, 1592-605.



Confocal immunofluorescent analysis of mouse embryonic stem cells growing on mouse embryonic fibroblast (MEF) feeder cells using SUZ12 (D39F6) XP[®] Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:800
Chromatin IP	1:100

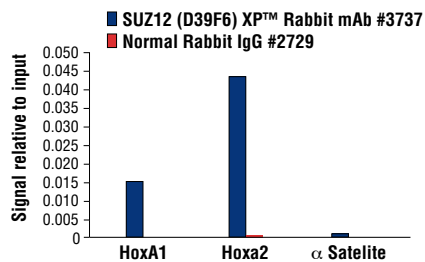
For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

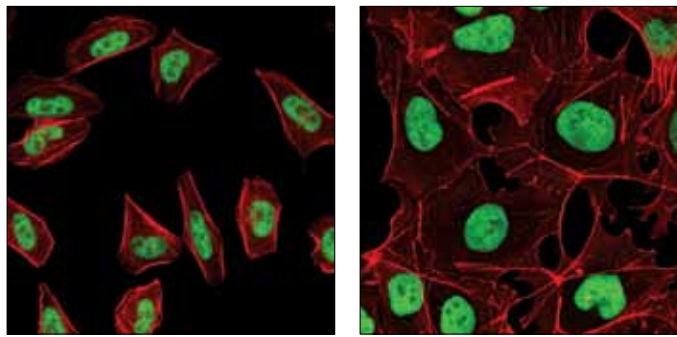
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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Chromatin immunoprecipitations were performed with cross-linked chromatin from 4×10^6 NCCIT cells and either 5 μ l of SUZ12 (D39F6) XP[®] Rabbit mAb or 2 μ l of Normal Rabbit IgG #2729 using SimpleChIP[®] Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using SimpleChIP[®] Human HoxA1 Intron 1 Primers #7707, SimpleChIP[®] Human HoxA2 Promoter Primers #5517, and SimpleChIP[®] Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin (equivalent to one).



Confocal immunofluorescent analysis of HeLa cells (left) and NTERA2 cells (right) using SUZ12 (D39F6) XP[®] Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red).